Media codes of ethics for health professionals and media professionals: a qualitative study

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Abstract

Media is an opportunity for health professionals; however, it is not free of threats. Fixing the threats requires professional systematization through developing practical guidelines, which brings us to the goal this study was designed to achieve.

The study was conducted qualitatively through literature review, semi-structured interviews, and a focus group discussion with health and media experts, as a result of which 486 codes were extracted and classified into 4 groups. The first group was addressed to media professionals and contained 126 codes in 5 categories: seeking and reporting the truth, harm minimization, integrity, independence, and respect for the rights of others. The second and third groups were addressed to health professionals, the former (150 codes) dealing with formal media, and the latter (190 codes) dealing with cyberspace. These groups were both categorized into 6 categories: scientific demeanor, beneficence, harm minimization, integrity, maintaining the dignity of the profession and professionals, and respect for the rights of others. The fourth group was addressed to the public audience and contained 20 codes categorized into 2 categories: ethics of belief, and ethics of (re-)publishing.

Since the study was conducted during the pandemic/infodemic, the proposed codes can help reduce possible conflicts in similar future situations.

Keywords: *Media ethics; Codes of ethics; Media professional; Health professional; COVID-19 pandemic.*

Introduction

In the 21st century, which is called the era of mediacracy (1), confrontation with media seems inevitable (2). Many theorists have examined this issue by using different methods (3). James Lull (1982), for example, demonstrated how the electronic media frames the daily lives of families (4). Albert Borgmann explained this concept by proposing the theory of "focal things and focal practices" from another perspective (5). Many professions and professionals are also struggling with this confrontation. The more prominent the social role of professions and the more vital the function of professionals in the society, the more unavoidable this confrontation becomes (6).

The COVID-19 pandemic has highlighted the importance of this issue (7). During the pandemic, the World Health Organization (WHO) has issued numerous warnings about the infodemic, fact-check, and information diet (8). The development of social media has doubled the importance of this confrontation for health professionals (9). Informal medicine is a term coined in this regard following the influence of social media on the physicians' personal and professional lives (10).

The relation between health and media has grown so rapidly and convergently that Clarke (2003) has identified it as the most influential reason for medicalization in the contemporary world (11). Some have warned of harm in this convergence; however, many other health professionals have accepted that the increasing influence in the market, culture, politics and society goes through this interaction (12). Media professionals likewise shape the tastes of their audiences according to this convergence and take advantage of the market. But in this media-health win-win game, the one that often loses is morality. This is the point where media ethics and medical ethics can redefine and declare their necessities (11).

In short, health and media in today's world have an inevitable relation that can be convergent and synergistic, but despite the opportunities that media provides to the field of health, it is not threat-free (6); the nature of these threats is such that they can occasionally mislead and disturb the public audience, and undermine the moral and professional dignity of professionals (Table 1).

Table 1. The most prominent media opportunities and threats for health professionals

Opportunities	Threats
Dissemination of information in order to promote public health	Dissemination of misinformation, fake news or lay knowledge
Reducing the burden of diseases through public education	Promoting the medicalized and advertised aspects of medicine in the public sphere
Desirable presence of the professionals in the media increasing people's trust and enhancing the prestige of the profession and professionals in the public sphere	Undesirable presence of the professionals in the media causing negative reflections for the profession and professionals in the public sphere
Complying with ethical codes and clarifying the challenges of public health in order to attract public participation and promote public health	Violating ethical codes and undermining the status of the profession and professionals in the society

Fixing the above-mentioned threats requires ethical and professional systematization. One of the most tried and tested mechanisms of organizing such professional relations is the development of local and practical codes of ethics and encouraging the professionals to adhere to the maximum level of these procedures (13).

The literature review reveals no comprehensive and integrated study covering both the target audience (health and media professionals) and the public audience (public sphere) simultaneously in terms of both separate (external) and yet relevant (internal) codes of ethics/conduct. An integrated holistic view of these scattered yet relevant audiences is missing in the literature. The absence of such a view is also evident in Iranian interdisciplinary literature, which is doubly important, considering the goal of the present study, that is, the compilation and development of comprehensive local and practical codes of ethics to optimize the health-media professionals' encounter.

Methods

Qualitative approach

The study was conducted from April 2020 to July 2021 through literature review, semi-structured interviews, and a focus group discussion (FGD) with interdisciplinary health and media professors, policy makers and professionals.

Researcher characteristics

One of the 4 members of the research team was female. At the time of and during the study, MK was MD, Ph.D. candidate in medical ethics, and a media professional. SN and HN were academic members of the school of medicine at a local university, the former teaching methodology and

the latter teaching medical ethics and philosophy of ethics. YS was an academic board member of the Center for Media Studies teaching mass communication at the Faculty of World Studies, University of Tehran. All researchers were involved in all phases of the study except for conducting the interviews, which were performed by MK. The research team aimed at de-threatening and optimizing the health-media professional's encounter through compiling and developing local and practical media codes of ethics/conduct.

Sampling strategy

The interviewees were selected by multi-stage purposive sampling through homogeneous, typical and snowball methods. In the first stage, a group of professors and professionals in the field of media and medical ethics who were involved in health-oriented media were selected using the homogeneous method. In the second stage, prominent figures were chosen for in-depth interviews (typical method). Finally, through their introduction (snowball method), more professionals and policy makers who were expected to raise new discussions on the subject were added to the interviewees.

Ethical issues

Informed consent was obtained at the beginning of the interviews verbally. Given that the interview questions were accompanied by up-to-date examples of recent events (esp. about the pandemic), and since most of them featured specific individuals in the media, health and politics, interviewees were assured of confidentiality. Participants were also informed that the purpose of the study was not to criticize specific acts or individuals in the pandemic period or in the health-media relations. In this regard, the objectives of the research were clarified for the interviewees. They were also told that they could not be informed of other interviewees' opinions and only the final results of the study would be communicated to them.

The study was approved by the research ethics committee of the School of Medicine, Tehran University of Medical Sciences, Tehran, Iran (IR.TUMS.MEDICINE.REC.1398.963).

Data Collection instruments

MK searched the relevant literature by using keywords including media ethics, photojournalism ethics, cyber journalism ethics, ethical journalism, digital media ethics, cinematic ethics, media codes of ethics, media scandal, media literacy, infodemic, health literacy, health journalism, health communication, open science, and science communication, on PubMed, Scopus, Cochrane, ProQuest, Google Scholar, Iranmedex, and Irandoc

databases. After filtering 3108 documents, 379 were finally selected for the literature review, but the interview questions were mainly derived from the same study. The research team brainstormed 15 open-ended questions as the in-depth interview framework. In this way, the interviewees would be encouraged to think aloud about the topics brought up in the questions accompanied by up-to-date examples of recent events in the field of health-media encounter, especially during the pandemic. Table 2 provides a summary of the content and domain of these questions.

Data collection methods

Following the literature review, the semi-structured interviews were conducted until data saturation was obtained after 20 interviews. An FGD was conducted subsequently with the participation of 7 out of the 20 health and media experts and medical ethicists interviewed previously. The average interview duration was about 90 minutes and all the interviews were recorded through note-taking and verbatim transcription. The FGD was conducted for 120 minutes to ensure further validation and confirmation of the generated codes, categories and subcategories.

Units of the study

20 participants were engaged in semi-structured interviews, of which 6 were professors of medical ethics and mass media or communications, 4 were policy makers in the field of health or media, 2 were prominent filmmakers with a history of making popular films in the field of public health, 2 were experienced public health journalists, 1 was a documentarist, 1 was a public health TV programmer, 1 was a physician with a past history of managing a popular news agency, 1 was the chair of the department of health communication in a research institute, 1 was the chair of the department of philosophy of science in a research institute, and 1 was the owner of a well-known journal in the field of public health (Table 3). The FGD was performed by 7 participants who had raised innovative discussions in the interviews.

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Table 2. Domains and topics of the interview questions

Domains	Topics
About health professionals	*Evaluating the media activity of health professionals during the pandemic *Considering the ethical norms threatened by health professionals in the media *Explaining the circumstances under which the interaction of health professionals with the media can harm the position of the profession and professionals in the public sphere *Suggesting solutions to prevent or manage the threats hidden in the professionals' encounter with the media *Pointing out the most important opportunities and threats for health professionals dealing with the media
About media professionals	*Pointing out the most important issues in publishing health news and information *Assessing the professional activity of the Iranian media during the pandemic *Explaining the circumstances under which the media help maintain and promote the health level of the society
About health and media professionals	*Explaining the circumstances under which the transmission of health messages can lead to the spread of anxiety in the society *Explaining the circumstances under which the transmission of health messages can lead to the formation of an induced demand in the society *Explaining the circumstances under which the media can encourage unjustified medicalization in the society
About the public audience	*Pointing out the most important issues in sharing or republishing health news *Explaining the best ways to deal with misinformation or fake news in the public sphere *Explaining the best ways in which the public audience can validate health news in the media *Pointing out the most important messages derived from religious teachings to spread health information and to prevent the spread of misinformation

Table 3. Demographic data of the interviewees

Interviewees (N: 20)	N	%
Age (year) (mean ± SD)	55.08 ± 10.425	
Professor of Medical Ethics	3	
Female	1	33
Male	2	67
Professor of Communications or Mass Media	3	
Female	1	33
Male	2	67
Health Policy Maker	2	
Female	1	50
Male	1	50
Media Policy Maker	2	
Female	1	50
Male	1	50
Health Professional	5	
Female	2	40
Male	3	60
Media Professional	5	
Female	2	40
Male	3	60
Work Experience		
5 years >	1	5
5 - 10 years	2	10
10 - 20 years	4	20
20 years <	13	75

Data processing, analysis and confirmation

Data analysis was performed using a general deductive approach. The Graneheim and Lundman method was used for content analysis (14). Data analysis began at the same time as data collection in the second phase of the study, so that the findings of each interview could be used to reconstruct and improve subsequent interviews with subsequent interviewees to achieve more successful performance and more accurate results in the process of data collection.

In order to make full use of all the findings and not to omit inconsistent findings, the interviews were reread several times, and the data were matched with the findings of the literature review so that no heterogeneous data would be ignored. In labeling, while extracting the initial code, an attempt was made not to ignore any of the heterogeneous findings. Audio files of the in-depth interviews were carefully listened to and transcribed. Microanalysis was performed by analyzing and interpreting the data line by line, and finally, 486 open codes were extracted and classified in 2 stages:*1. According to the audience*

All codes were divided into 4 groups (Table 4).

2. According to the content

The codes of each of the 4 groups were categorized separately (Tables 5, 6, 7, 8). Finally, 19 categories, 54 subcategories, and 486 codes were extracted.

Table 4. The audience-oriented classification of codes

Codes focused on the health-oriented media (486 items)	Codes addressed to the public audience (20 items)		
	Codes addressed to the target audience (466 items)	Codes addressed to media professionals (126 items)	
		Codes addressed to health professionals (340 items)	Codes dealing with formal media (150 items)
			Codes dealing with informal media (190 items)

Techniques to enhance trustworthiness

Member checking (15), prolonged engagement (16), thick description (17), data source triangulation (18), and optimal use of tables (19) were done to enhance trustworthiness.

Reporting

This study is reported according to the "Standards for Reporting Qualitative Research (SRQR) guideline (20).

Results

The literature review revealed that the link between health professionals, the media and the public

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audience seems obvious and superficial at the first glance; however, in the depth of this linear and simple relation that exists between the 3 spheres (health, media, and public sphere), there is a complex and close connection that indicates the common roots of moral systems (Figure 1). This internal bond can be better understood in the numerous references that exist between the codes of conduct in the 3 spheres of the study.

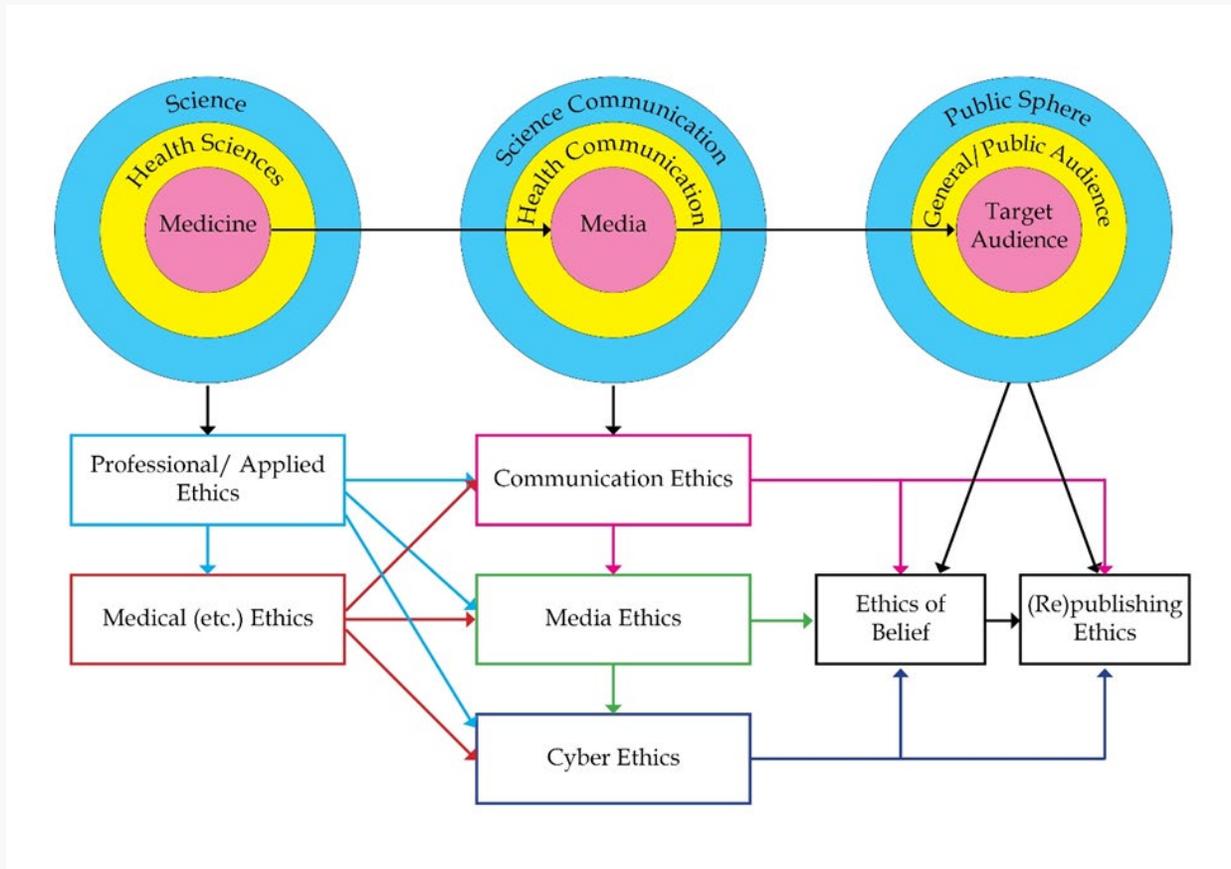The field study was carried out using questions derived from the literature review through 20 semi-structured interviews and an FGD with 7 interdisciplinary health and media experts whose characteristics were mentioned earlier (Tables 2 and 3).

After coding the interviews and drawing the content analysis tables, 486 codes were extracted and classified in 2 stages:

in the first stage, according to the audience (Table 4),

and in the second stage, according to the content (Tables 5, 6, 7, 8).

Figure 1. The concept map of the relations between media, health and ethics

*1. **Codes addressed to media professionals***

Codes of conduct addressed to media professionals (126 codes) are categorized into 5 categories and 15 subcategories (Table 5)

1.1. Seeking and reporting the truth

Media professionals must be accurate, fair and impartial in gathering and publishing news and information. This category consists of 3 subcategories (accuracy / fairness / impartiality).

"News media are crazy about speed, and the first thing that falls victim to speed is accuracy. But in health news, the accuracy of the message is usually more important than speed." [Participant No. 1]

1.2. Harm minimization

Media professionals are required to remember that information dissemination cannot be a license to inflict unnecessary sufferings on individuals or the society. This category includes 4 subcategories (considering health anxiety / avoiding stereotypes, stigma and social discrimination / caring for the vulnerable / facing sensitive topics).

"I think one of the reasons why the suicide rate increased significantly in Iran during the pandemic was that social media covered the suicide news contrary to international guidelines." [Participant No. 8]

1.3.   Integrity

What motivates media professionals to prioritize the well-being of the society over personal and professional interests is their integrity. This category is divided into 2 subcategories (honesty and transparency / responsibility and accountability).

"In the hospital, a filmmaker has no right to point his or her camera in any direction he or she wants. When patients are your subjects, you must know that they are vulnerable and you are responsible for them." [Participant No. 9]

1.4. Professional independence

Media professionals are expected to be the voice of the voiceless by demanding and declaring their needs boldly and transparently. Professional independence is the premise of such courage and transparency. This category consists of 3 subcategories (managing conflict of interests / facing ads / professional excellence).

"In the midst of the pandemic, one institution that had its own vested interest in a specific vaccine held a press conference about its vaccine, which had not even received the code of ethics license in research yet. But the media easily published the news. What that institution did was immoral and so were the reports of those media outlets. Clearly one

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of them did not mention this conflict of interests and just published those unproven claims." [Participant No. 5]

1.5. Respect for the rights of others

Media professionals are expected to recognize and take into account the privacy and human dignity of individuals, including their subjects and sources as well as their colleagues and audiences. This category includes 3 subcategories (considering privacy / obtaining informed consent / observance of social norms).

"Patients' privacy has been ignored in our national TV several times during the pandemic, because we have never had a clear-cut guideline to follow in this regard." [Participant No. 15]

Table 5. Categorization of 126 codes for media professionals

Categories	Subcategories	Number of Codes	
Seeking and Reporting the Truth	accuracy	16	23
	fairness	4	
	impartiality	3	
Harm Minimization	considering health anxiety	12	51
	avoiding stereotypes, stigma and social discrimination	3	
	caring for the vulnerable	14	
	facing sensitive topics	22	
Integrity	honesty and transparency	8	19
	responsibility and accountability	11	
Professional Independence	managing conflict of interests	7	14
	facing ads	5	
	professional excellence	2	
Respect for the Rights of Others	considering privacy	4	19
	obtaining informed consent	12	
	observance of social norms	3	

2. Codes addressed to health professionals dealing with formal media

Codes of conduct addressed to health professionals in their interviews and interactions with the formal media (150 codes) were categorized into 6 categories and 17 subcategories (Table 6).

2.1. Scientific demeanor

The statements of health professionals in the media should be scientific, evidence-based and in the area of their expertise and/or responsibility. This category is divided into 2 subcategories (scientific expression / commenting in the area of expertise and responsibility).

"Many of the contradictions in the pandemic period were due to the fact that some health professionals

who did not have the expertise or responsibility made ill-considered populist statements or claims that were soon proven to be fake or false." [Participant No. 12]

2.2. Beneficence

In each media interaction, health professionals are expected to assess the benefits that their media activities will bring to their audience. This category consists of 2 subcategories (effectiveness / patient and community health care).

"If you, as a doctor, have a medical message that really benefits your community but you do not know when and how to communicate it, according to the media language, your message will be martyred." [Participant No. 6]

2.3. Harm minimization

Health professionals are expected to assess in each media interaction whether the benefits of their media activity outweigh the harms. This category includes 3 subcategories (considering health anxiety / avoiding stereotypes, stigma and social discrimination / caring for the vulnerable).

"Perhaps you remember that the Minister of Health said we will not allow our nation to become the lab mice for the COVID-19 vaccine. From my point of view, that was a typical example of stereotyping or stigmatization to all participants in scientific

research, which was both immoral and unprofessional." [Participant No. 5]

2.4. Integrity

What persuades health professionals to prioritize the interests of the society over personal and professional interests is, above all, their integrity, the codes of which can be divided into 2 subcategories (transparency and honesty/ accountability and responsibility).

"If you, as a health professional, say something in the media today that will come out to be false tomorrow, you have to accept the responsibility and seek compensation and correction in the media. This is your duty and the right of your audience." [Participant No. 19]

2.5. Maintaining the dignity of the profession and professionals

Health professionals are expected to beware of any act in their media activities that could damage the reputation of themselves or their colleagues or profession. This category includes 4 subcategories (managing conflict of interests / facing ads / organizational commitment / respect for the profession and colleagues).

"We must adopt a clear stance on medical advertising, that is, we either have to accept the essence of the issue and set a framework for it, or

announce that advertising is absolutely forbidden. Right now we have a situation of indecision and uncertainty, and, from time to time, an ill-advised advertisement damages the reputation of the profession and health professionals." [Participant No. 5]

2.6.   *Respect for the rights of others*

Respect for the patient's autonomy is the first of the four principles of medical ethics, but respect for the rights of others in the media is broader and includes media audiences, as well as media subjects and professionals. This category is divided into 4 subcategories (considering privacy / obtaining informed consent / confidentiality / observance of social norms).

"In a live TV program, for example, the doctor does not have the right to ask the patient any question he or she may ask in his or her office. The meaning of privacy is different at the office than in the media." [Participant No. 17]

Table 6. Categorization of 150 codes for health professionals dealing with the formal media

Categories	Subcategories	Number of Codes	
Scientific Demeanor	scientific expression	13	19
	commenting in the area of expertise and/or responsibility	6	
Beneficence	effectiveness	15	23
	patient and community health care	8	
Harm Minimization	considering health anxiety	16	31
	avoiding stereotypes, stigma and social discrimination	4	
	caring for the vulnerable	11	
Integrity	transparency and honesty	11	24
	accountability and responsibility	13	
Maintaining the dignity of the profession and professionals	managing conflict of interests	8	27
	facing ads	7	
	organizational commitment	4	
	respect for the profession and colleagues	8	
Respect for the Rights of Others	considering privacy	7	26
	obtaining informed consent	11	
	confidentiality	4	
	observance of social norms	4	

3. Codes addressed to health professionals dealing with cyberspace

Codes of conduct addressed to health professionals in cyberspace, especially social media (190 codes) are categorized into 6 categories and 20 subcategories. (Table 7)

3.1. Scientific demeanor

This category consists of 4 subcategories (understanding cyberspace / keeping the personal and professional life separate / scientific expression / commenting in the area of expertise and responsibility).

"The first principle in understanding cyberspace is to know that nothing is ever lost here. That is, every piece of content that you publish and every trace that you leave behind will eventually remain in this space, and one day this digital footprint may cause you trouble." [Participant No. 7]

3.2. Beneficence

This category includes 2 subcategories (effectiveness / patient and community health care).*"Believe it or not, many health professionals have used social media to get likes and followers and become celebrities during the pandemic, instead of using the cyberspace to care for public health." [Participant No. 13]*

3.3. Harm minimization

This category is divided into 3 subcategories (considering health anxiety / avoiding stereotypes, stigma and social discrimination / caring for the vulnerable).

"Coronavirus was first associated with a specific country, and in Iran with a specific city, but the stigma and social consequences of this stigma were so great that the WHO tried to eliminate this stigma from cities and countries in the news, and so did the Ministry of Health in Iran." [Participant No. 3]

3.4. Integrity

This category consists of two subcategories: (transparency and honesty / accountability and responsibility).

"The least amount of honesty that can be expected of someone in social media is that they present their expertise exactly as it is. But because there is no special supervision over social media, many health professionals pretend to be much more knowledgeable than what they really are in the virtual sphere." [Participant No. 5]

3.5. Maintaining the dignity of the profession and professionals

This category is divided into 5 subcategories (managing virtual interaction / managing conflict

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of interests / facing ads / organizational commitment / respect for the profession and colleagues).

"It is against the dignity of the medical profession to follow one's patient on Instagram or send him or her private messages. If the message has a content outside of the medical framework, it is also immoral." [Participant No. 4]

3.6.   *Respect for the rights of others*

This category consists of 4 subcategories

(considering privacy / obtaining informed consent / confidentiality / observance of social norms).

"During the COVID crisis, the spokespersons of the Ministry of Health or the Medical Council have no right to insult critics using personal rhetoric on the same page that they publish the posts of the ministry or the council. It is apparent that many people associate such remarks with that organization, not that person. This is against the norms of the society and it is also unprofessional." [Participant No. 2]

Table 7. Categorization of 190 codes for health professionals dealing with cyberspace (esp. social media)

Categories	Subcategories	Number of Codes	
Scientific demeanor	understanding cyberspace	5	29
	keeping personal and professional life separate	5	
	scientific expression	13	
	commenting in the area of expertise and/or responsibility	6	
Beneficence	effectiveness	14	22
	patient and community health care	8	
Harm minimization	considering health anxiety	15	30
	avoiding stereotypes, stigma and social discrimination	4	
	caring for the vulnerable	11	
Integrity	transparency and honesty	11	24
	accountability and responsibility	13	
Maintaining the dignity of the profession and professionals	managing virtual interaction	9	48
	managing conflict of interests	10	
	facing ads	9	
	organizational commitment	6	
	respect for the profession and colleagues	14	
Respect for the rights of others	considering privacy	12	37
	obtaining informed consent	12	
	confidentiality	9	
	observance of social norms	4	

4. Ethical statement regarding the public audience

This statement contains 20 ethical recommendations to the public audience dealing with media messages, all of which can be classified into 2 categories. (Table 8)

Table 8. Categorization of 20 ethical recommendations for the public audience

Categories	Number of Ethical Recommendations
Ethics of belief	16
Ethics of (re-)publishing	4

4.1. Ethics of belief

Some ethicists consider believing to be voluntary (or at least semi-voluntary) and, on this basis, consider it immoral to accept claims without sufficient evidence.

"An Iranian celebrity in one corner of the world said if you blow a hair dryer up your nose, you will not get COVID-19. This misinformation was spread on social media so fast that many people burned their noses! Did the media do that? No! Had the doctors confirmed the message? No! But the public users' beliefs matter in social media, and can turn misinformation snowflakes into avalanches." [Participant No. 1]

4.2. Ethics of (re-)publishing

COVID-19 Pandemic (in the world) and the ensuing infodemic (in cyberspace) showed people's role in the dissemination of misinformation or fake news.

"Think twice for a few minutes before republishing anything and ask yourself, "Is this content really true? What is my intention in republishing this? What are the consequences of publishing this content?" These simple questions can sometimes prevent the republishing of misinformation or fake news." [Participant No. 12]

Table 9 visualizes all of the prementioned classifications in a holistic framework. This framework is a conceptualized format that provides a helicopter view of the subject so that while avoiding the confusion caused by the mass of codes, we can organize our minds and, at a macro level, understand the relevance of the ethical codes and principles. In the same way, this study tried to pay attention to both ethical codes and principles in order to aim at discourse-building (through ethical principles), and taking serious action (through developing codes of ethics) for media and health professionals in their interdisciplinary activities.

According to the interviews, if we want to compare media experts' perception of health and health experts' perception of media, it seems that media experts have a better understanding of health, while health experts' understanding of media seems more

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limited and is mainly focused on formal media. Also, media experts not only consider the quality of the presence in the formal media, but also pay attention to how health professionals appear in the informal media and how they interact with the public audience in order to evaluate their media activities.

Table 9. A framework covering all codes of ethics and target groups of the study

Groups and Categories	Media Professionals	Health Professionals vs. Formal Media	Health Professionals vs. Social Media	The Public Audience
Harm minimization	considering health anxiety; caring for the vulnerable; avoiding stereotypes, stigma and social discrimination; facing sensitive topics	considering health anxiety; caring for the vulnerable; avoiding stereotypes, stigma and social discrimination	considering health anxiety; caring for the vulnerable; avoiding stereotypes, stigma and social discrimination	ethics of publishing / republishing
Beneficence		effectiveness; patient and community health care	effectiveness; patient and community health care	
Respect for the rights of others	considering privacy; obtaining informed consent; observance of social norms	considering privacy; obtaining informed consent; confidentiality; observance of social norms	considering privacy; obtaining informed consent; confidentiality; observance of social norms	
Integrity	transparency and honesty; accountability and responsibility	transparency and honesty; accountability and responsibility	transparency and honesty; accountability and responsibility	
Professional independence / Maintaining the dignity of the profession and professionals	managing conflict of interests; facing ads; professional excellence	managing conflict of interests; facing ads; organizational commitment; respect for the profession and colleagues	managing virtual interaction; managing conflict of interests; facing ads; organizational commitment; respect for the profession and colleagues	
Seeking and reporting the truth / Scientific demeanor	accuracy; impartiality; fairness	scientific expression; commenting in the area of expertise and responsibility	scientific expression; commenting in the area of expertise and responsibility; understanding cyberspace; keeping personal and professional life separate	Ethics of belief

The categories of interest of these two groups were also different in most interdisciplinary issues. For example, when analyzing the subject matter of filming patients and vulnerable groups (e.g., sexual victims), most health professionals were focused solely on rasterizing the victims' faces; most media professionals, however, considered this superficial, saying that the victims' privacy should be maintained more fundamentally and by using a more appropriate technique. Some filmmakers even believed that pixelating the faces of victims is not a good solution as it might lead to revictimization or labeling, causing a sense of rejection and despair among vulnerable subjects (esp. sexual victims and children). These filmmakers found adjusting the camera angle and specific filming techniques more suitable alternatives.

While many health professionals considered the above-mentioned subject to be the most important topic in health-oriented media issues most media professionals found the contradictions in health professionals' expressions during the pandemic to be of great significance. In this regard, some media professionals believed that health professionals should demonstrate a degree of intellectual humility, expecting that this humility would find its way into the tone and expression of health professionals and gradually improve the public view of science.

One point that most media and health professionals agreed on was the emphasis on the lack of a systematic dialogue between the two groups, which was referred to as the weakness of interdisciplinary discourse. Most of them believed that healthoriented media issues should be included in university curriculums, and some considered the basics of media literacy and health literacy as absolutely necessary even for school students.

Discussion

An integrated guideline containing 486 codes of conduct for optimizing the ethical-professional relations of media-health professionals can be considered as the most important result of the present study. The literature review revealed no comprehensive study covering both the target audience (health and media professionals) and the public audience (public sphere) in term of integrated codes of ethics; therefore, the novelty of the study may be that it attempted to achieve an interdisciplinary comprehensiveness in the research topic through an integrative approach. Also, the integration of health humanities concepts (e.g., medical ethics) into the field of health

communication is another achievement of the present study.

A scrutiny of the most inclusive media codes of ethics shows that 'harm minimization', 'reporting the truth', and 'independence' are the most common themes available in well-known valid guidelines; for example, the Society of Professional Journalists (SPJ) (21), and the United Nations Communications Group (UNCG) (22) agree on the 3 themes mentioned above; however, both of them neglect an important category, that is, 'respect for the rights of others', and its subcategories including 'considering privacy' and 'obtaining informed consent'. The UNICEF has paid attention to these subcategories in its codes for reporting child abuse (23), but has ignored the important subcategory of 'observance of social norms' in the relevant category. In the present study, both of the above shortcomings are overcome. In other words, the category of 'respect for the rights of others' is included and comprises of 3 subcategories (considering privacy, obtaining informed consent, and observance of social norms) and separate codes of conduct are assigned to each of them.

Accountability is another common theme in the media codes of ethics that SPJ (21) and UNCG (22) have taken into account; however, the UNCG,

unlike the SPJ, has added 'transparency' to 'accountability'. Nevertheless, neither of them has paid attention to the semantic differences between 'accountability' and 'responsibility' (24). In the present study, this shortcoming is also eliminated by the inclusion of 'integrity' as a distinct category comprised of two subcategories: 'accountability and responsibility', and 'honesty and transparency', with differentiated codes of conduct assigned to each of them.

Despite its richness, Iranian media literature does not concern itself with the subject of ethical codes, and the few works written in this field often lack a native color. One of the best is the book "Professional and Applied Ethics in the Islamic Republic of Iran Media: Concepts and Examples" which has distinctive features; among all, it has targeted media professionals based on their specific duties and has developed different ethical codes for each particular professional group. Nevertheless, this work is mainly aimed at the formal and traditional media (esp. radio and television), while the tendency of the public sphere is increasingly moving away from the formal and traditional media and approaching modern and digital media (25). The present study has tried to cover this gap by dedicating a special part to the cyberspace.

The aforementioned lack is also evident in Iranian

medical ethics literature. Although the studies conducted in this field have a desirable diversity, none have examined a set of ethical codes that cover both the target audience (health and media professionals) and the public audience. Some of the best works in this area are: "A General Guide to the Professional Ethics of Medical Professionals and Affiliates of the General Medical Council of the Islamic Republic of Iran" (26), "A Guide to Professional Behavior in Cyberspace for the Professionals of Tehran University of Medical Sciences" (27).

Special attention to social media can be found in the Australian Medical Association (AMA) and its Council of Doctors in Training (AMACDT) codes of conduct, which categorizes all codes in 6 categories: confidentiality, privacy, advertising, professional reputation, managing online comments, and using social media for advocacy (28, 29). However, it neglects important issues such as considering health anxiety, avoiding stereotypes, stigma and social discrimination, caring for the vulnerable, scientific expression, and commenting in the area of expertise and/or responsibility. The latter topic is covered in one of the oldest guidelines for health professionals dealing with the media (Keith Spiegel and Koocher's codes of conduct), which, due to the time

of its publication (1985), is mainly focused on printed media (12, 30). The present study tried to cover all the above-mentioned defects by compiling clarified themes and sub-themes, and assigning distinct codes of conduct to each while dedicating a separate section to health professionals' exposure to cyberspace (esp. social media).

Leaving aside the integrative approach to reach interdisciplinary comprehensiveness and the novelty of the present study, we must turn to the concept of news values, a criteria used by media professionals to determine which events are worthy of being reported in the news (31). The present study has tried to observe some of these values, including:

Timeliness

Since the study coincided with the COVID-19 pandemic/infodemic, we were able to obtain the opinions of interdisciplinary media and health experts on the encounter between the two areas through semi-structured interviews and FGD.

Impact

The COVID-19 pandemic significantly increased media attention to health professionals in Iran. The dramatic increase in the number of health professionals' followers in cyberspace (e.g., Instagram) and the emergence of unprecedented

issues such as some health professionals establishing fan clubs and disclosing the medical records of celebrities suffering from COVID-19 on social media and similar issues brought about updated questions, which could be debated through semi-structured interviews and FGD.

Magnitude

Compiling 486 codes of conduct through studying 379 documents including books and original articles, and conducting 20 semi-structured interviews with health and media experts can be considered as examples of numerical magnitude in the study.

Prominence

The participants of the study are all authorities and prominent figures in the field of media or health and their fame is rooted in their knowledge, skills and expertise.

Proximity

Since the significant works in this field rarely have native color, the field study tried to cover this gap by focusing on the challenges faced in Iran during the pandemic/infodemic period. Hence, the examples and solutions expressed during the interviews, not only made the study up-to-date, but could also help solve problems in this field, and following the proposed codes can help reduce

potential contextual problems in similar future situations.

Since our study was conducted during the pandemic, we faced a serious limitation, especially at the beginning of the field study, which required in-depth and lengthy face-to-face interviews with interdisciplinary health and media experts. In order to turn this challenge into an opportunity, we used video call interviews to find out the opinions of some well-known Iranian health and media experts living outside of Iran and learn how these two fields interact in other countries during the pandemic. Selfcensorship was another limitation the pandemic imposed on this study. Since many of the pandemic media outlets in Iran were challenged and criticized, some of the participants censored their own answers to questions about current examples of media weaknesses obvious in the health system or health authorities of Iran. To overcome this limitation, all participants were assured of confidentiality. On the other hand, since the significant works in this field rarely had native color, the study tried to focus on the health-media challenges in Iran, especially during the pandemic period. Hence, timeliness and proximity can be considered as two of the most important strengths of the study that can be seen in the experts'

opinions about the health-media encounter during the pandemic.

Member checking, prolonged engagement, thick description, and data source triangulation were also done to overcome the limitation of generalizability that threatens most qualitative studies. To take a step towards interdisciplinary comprehensiveness, the study tried to cover both the target audience (health and media professionals) and the public audience with 4 separate sets of codes of ethics. Bringing the concepts of health humanities into the field of health communication has been another attempt at coming closer to one of the initial goals of the study, which was interdisciplinary comprehensiveness.

Conclusion

The study achieved 486 integrated codes of conduct to optimize the health-media encounter through an integrative approach that is missing in the literature. To cover both the target audience (health and media professionals) and the public audience (public sphere) with relevant codes of ethics, the study integrated health humanities concepts (e.g., medical ethics) into the field of health communication and used a holistic view to predict and evaluate the professional and ethical behavior of each group of research audiences from

different perspectives in various situations. That is why health anxiety, stigmatization, social discrimination and similar issues have been highlighted in the ethical codes of health professionals from the public audience's perspective, and effectiveness is emphasized from the media point of view.

The study also revealed the differences between media professionals' and health professionals' views on existing interdisciplinary challenges. The findings show that while media professionals' approach to such issues is mainly consequential and pragmatic, health professionals have a duty-based and virtue-based view of these matters.

Given the weakness of the interdisciplinary discourse and the increasing convergence of media and health, it seems that conducting complementary studies to evaluate the codes proposed in this study can be helpful. Launching the field of media and health research in the areas focused on media-oriented and health-oriented studies can provide a suitable platform for such research. Also, analysis of these codes in relevant institutions (such as the High Council of Medical Ethics, the Cinema Organization, etc.) as well as the formation of a "Media and Health Council" in organizations in charge of public health and/or

media can monitor how the proposed codes are implemented and evaluated. Building a discourse can take place in the public sphere through media promotion, and incorporating the proposed codes in school and university curricula can be beneficial.

Conflict of Interests

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

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